



Coastal Protection and Restoration Authority of Louisiana

Office of Coastal Protection and Restoration

2013 Annual Inspection Report

Bayou Chevee Shoreline Protection

State Project Number PO-22
Priority Project List 5

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Orleans Parish

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I. Introduction

The Bayou Chevee Shoreline Protection Project (PO-22) is located in Orleans Parish within the northern section of the Bayou Sauvage National Wildlife Refuge, approximately 2 miles west of Chef Pass. The entire project covers approximately 212 acres. Project features include a rock dike, fish dips, and settlement plates.

II. Project Description and History

Construction of the Bayou Chevee project was completed on December 7, 2001. The project is divided into two areas, the North Cove area and the South Cove area (Appendix A). The rock dike protects both areas from shoreline erosion.

High wave energies associated with Lake Pontchartrain and Chef Pass have caused extensive erosion along the southern Lake Pontchartrain shoreline estimated to average 15 feet per year. Thus, without the project, the shoreline erosion would have amounted to 300 feet in 20 years. The project was intended to alleviate this problem through the construction of 8,875 feet (extended from the originally planned 5,690 feet by contract modification) of new rock dike that extends across both the North and South Coves. A pre-existing U.S. Fish and Wildlife Service rock dike located between the North Cove and the South Cove serves to link the dike sections into one continuous rock structure.

The principal project features include:

1. North Cove Rock dike – 4,825 feet
 - a. Height – 3.6 feet
 - b. Crown width – 4.9 feet
2. South Cove Rock dike – 4,050 feet
 - a. Height – 3.6 feet
 - b. Crown width – 4.9 feet
3. Fish dips – two on each of North Cove and South Cove dikes.
4. Settlement plate – placed on east-southeast side of each fish dip.
5. Flotation channels – channels were constructed a minimum of 82 feet from the center of the dike and silted in shortly after construction.

III. Inspection Purpose and Procedures

The purpose of the annual inspection of the Bayou Chevee Shoreline Protection Project (PO-22) is to evaluate the constructed project features to identify any deficiencies and prepare a report detailing the condition of project features and recommended corrective actions needed. Should it be determined that corrective actions are needed, CPRA shall provide a detailed cost estimate for engineering, design, supervision, inspection, construction contingencies, and an assessment of the urgency of such repairs (O&M Plan September 3, 2003). The annual inspection report also contains a summary of maintenance projects and an estimated projected budget for the upcoming three (3) years

for operation, maintenance, and rehabilitation. A summary of past operation and maintenance projects completed since completion of the project are outlined in Section II. The three (3) year projected operation and maintenance budget is shown in Appendix C.

An inspection of the Bayou Chevee Shoreline Protection Project (PO-22) was held on May 7, 2013. Representatives in attendance included: Kyle Breau, CPRA; Steven Armstrong, CPRA; Susan Hennington, USACE; and Jason Binet, USACE. At the time of the inspection the water level at the "Tally Ho" Hunting Club staff gauge was -0.8 NAVD88. Photographs from the inspection are included in Appendix B of this report.

IV. Inspection Results

Rock Rip Rap

The low water conditions gave the inspection team a view of the entire north and south rock segments. Settlement noted during the 2011 inspection is still evident based on the waterline. The rock structure has maintained its shape although some sections were beneath the water surface. No mud waves or loose geotextile were noticed. The settlement plates at each fish dip are no longer in operable condition. This was noted during the March 2012 survey. There was no visible damage to the dikes. The southern reach and the southern portion of the northern reach are showing noticeable signs of settlement. The northern portion of the northern reach is still at an acceptable grade.

V. Conclusions

While the water level was lower than normal, the settlement of the project feature was evident. At some points it was below the water level and at most it was just above. The northern section of the project is still at an acceptable elevation to provide shoreline protection; however, the majority of the project has settled below a height that would adequately protect the marsh during abnormal tidal conditions.

The next inspection is not scheduled until 2017; however, the budget allows for an inspection every two years.

VI. Recommendations

The inspection team discussed a maintenance rock lift, which would require requests for additional funds due to the minimal amount of remaining funds. Additional improvements discussed were extending the rock dike to meet the headland of Chef Menteur Pass or dredge filling in the open water area behind the rock dike. The USACE performed a survey across the rock dikes and through the marsh. Water depths of 2-4 feet were noted. However, both recommendations would occur outside the existing project boundaries.

Immediate Repairs

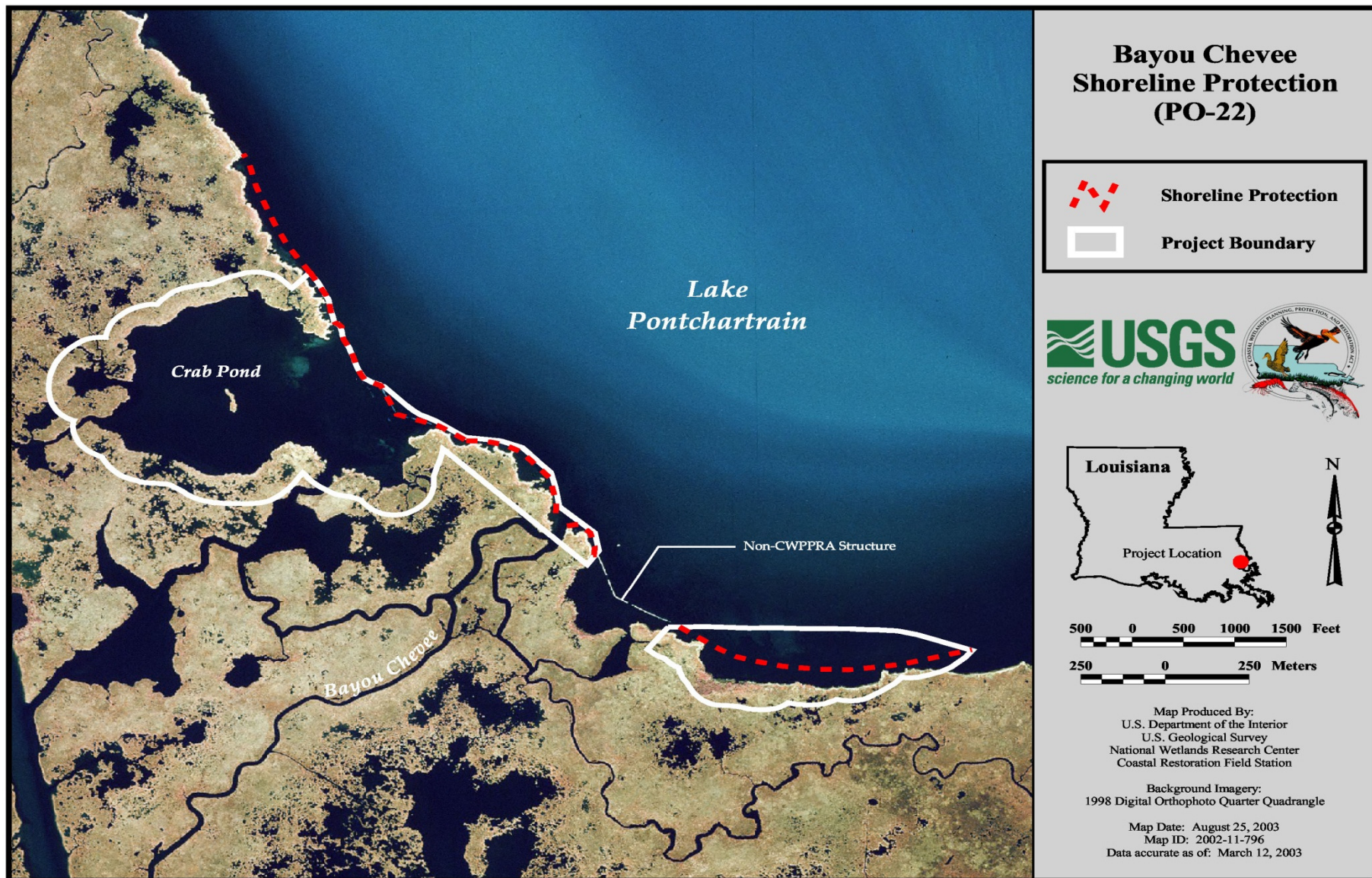
- Limited funds prevent maintenance at this time. The project team will meet to determine if future projects can address the recommendations discussed during this inspection.

Programmed Maintenance

- None

Appendix A

Project Features Map



Appendix B

Photographs



Photo #1 – Terminus of Southern Reach.



Photo #2 –Northern Reach.



Photo #3 –Fish Dip, Northern Reach.



Photo #4 –Failed Section, Southern Reach.



Photo #5 – Submerged Aquatic Vegetation behind rock dike



Photo #6 – Behind rock dike

Appendix C

Budget

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Appendix D

Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: **PO-22 Bayou Chevee Shoreline Protection**

Date of Inspection: 5/7/13

Time: 9:00 am

Structure No. N/A

Inspector(s): Breaux, Armstrong, Hennington, Binet

Structure Description: Foreshore Rock Dike

Water Level Inside: -0.8' Outside: -0.8'

Type of Inspection: Bi-Annual

Weater Conditions: Clear, Winds calm

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
North Cove Rock Dike	Fair	Settling	N/A		
					Settling below acceptable grade
South Cove Rock Dike	Poor	Settling	N/A		
					Settling below acceptable grade.
USFWS Dike Segment	Poor	Settling	N/A		
					Settled below acceptable grade.
Exposed Shore South of Dike	Poor	Inundated/ Washed Away	N/A		
					Recommend connecting terminus of south cove dike with headland at Chef Menteur Pass.
					Remarks: Project needs maintenance lift.